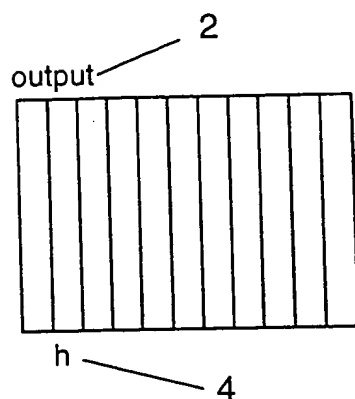One Phase SI

Slicing the output image.
The width of the slice depends on the decoder lens' frequency.

6

2

output

h

4

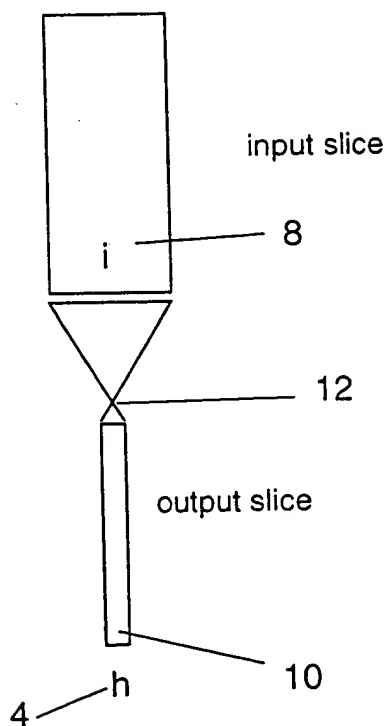The frequency of-
D-7X   =177 line/inch
D-7   =152.5 line/inch
D-6   =134 line/inch
D-9   = 69 line/inch

if the 'x2' option is on, it means that
the frequency will duplicate.

Inside of every slice the process is the same.

The process is the following:
getting the data from the input slice,
zooming, flipping (if the flip option is on)

input slice

i

8

12

output slice

4

h

10

10

$o=h*Density/100$

i=Basecode

8

Fig. 1

30

32

38   34

36

Elements of the S.I. Image are
Flipped.

Elements of the S.I. Image are
not Flipped.

Enlarged 400%

Enlarged 400%

(A)

(B)

Fig. 2

Two phase SI

The method is similar to that of the One Phase SI,
but the width of the slice is half of the One Phase SI.
Every odd slice input is 'source one' file,
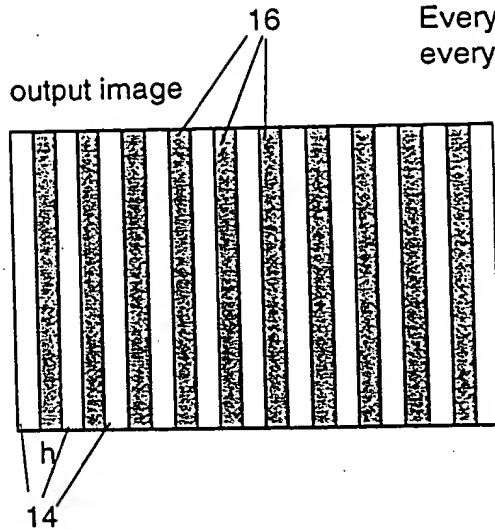every even slice is 'source two' file

output image

16

Fig. 3

h

14

The process inside slice is the same to that of the One Phase SI.

Three Phase SI

The method is similar to that of the Two Phase SI,
but the width of slice is one third of the One Phase SI.
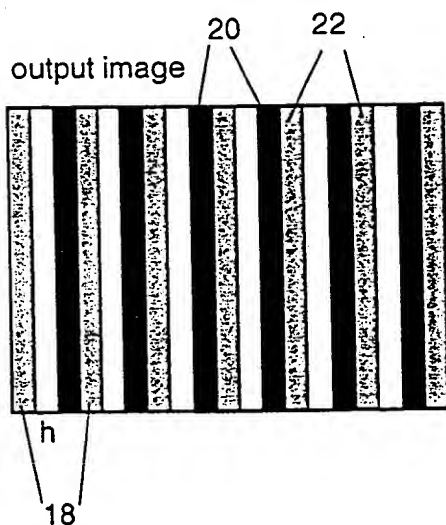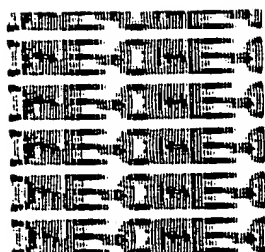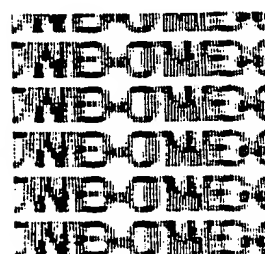Every third slice input is the same.

output image

20   22

Fig. 4

h

18

The inside slice process is the same as that of the One Phase SI.

One Phase

TwoPhase
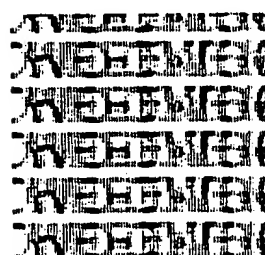
Three Phase

Fig. 5

POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK· 10

POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK· 20

POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK· 30

POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK· 40

POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK· 50

POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK· 60

POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK· 70

POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK· 80

POSTBANK· 90
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK· 100

POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·
POSTBANK·

Fig. 6

POSTBANI
POSTBANI
POSTBANI
POSTBANI
POSTBANI
POSTBANI Zoom Factor:30

POSTBANI Zoom Factor:63

POSTBANI
POSTBANI
POSTBANI
POSTBANI
POSTBANI
POSTBANI Zoom Factor:40

Zoom Factor:90

POSTBANI
POSTBANI
POSTBANI
POSTBANI
POSTBANI
Zoom Factor:57

POSTBANI
Zoom Factor:150

POSTBANI
POSTBANI
POSTBANI
POSTBANI
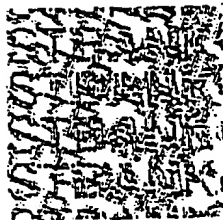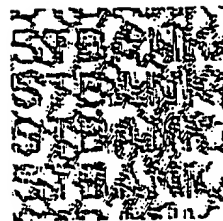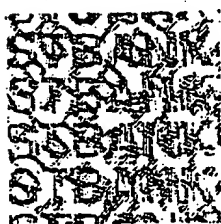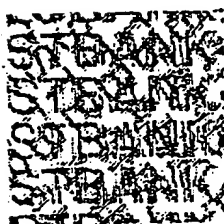POSTBANI
Zoom Factor:60

Zoom Factor:250

Fig. 7
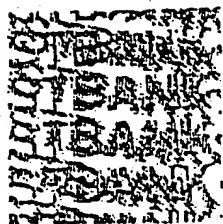
2 phase 10°

2 phase 20°
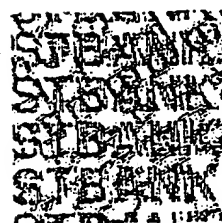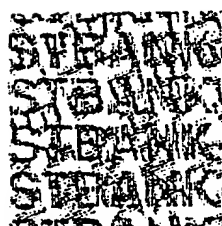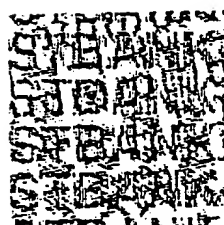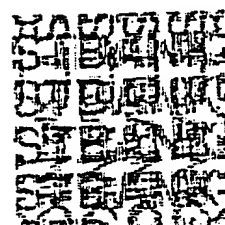
2 phase 30°

2 phase 40°

2 phase 50°

2 phase 60°

2 phase 70°

2 phase 80°

2 phase 90°

Fig. 8

DIGITAL
HIGH-RES
IMAGE
PROCESSED
IN
ADOBE
PHOTOSHOP

Original Color(RGB)
Image

42

Separate colors

48

44

46

Cyan   Magenta   Yellow   Black

SCRAMBLED INDICIA® SOFTWARE RUNNING ON A SILICON GRAPHICS WORKSTATION, USING THE
HIDDEN IMAGE FEATURE, COMBINES THE IMAGES FOR THE FINAL HIGH RESOLUTION SEPARATION.

52

50

42

USPS·USPS·US
PS·USPS·USPS
·USPS·USPS·U
SPS·USPS·USP
CUS USPS·USPS
PS·USPS·USPS
·USPS·USPS·US
SPS·USPS·USP
CUS USPS·USP
US·USPS·US·S
PS·USPS·US·S
·USPS·USPS·U
SPS·USPS·USP
S·USPS·USPS·

Invisible Image and Cyan
Visible image are merged
during Scramble to produce
a new CYAN Plate

Cyan
Visible Image
Magenta

Final Cyan Separation Which
Incorporates the Hidden Image
Feature created using SI®Software.

54

44

Invisible Image

Invisible Image and
Magenta Visible image are
merged during Scramble to
produce a new Magenta
Plate

56

Final Magenta Separation Which
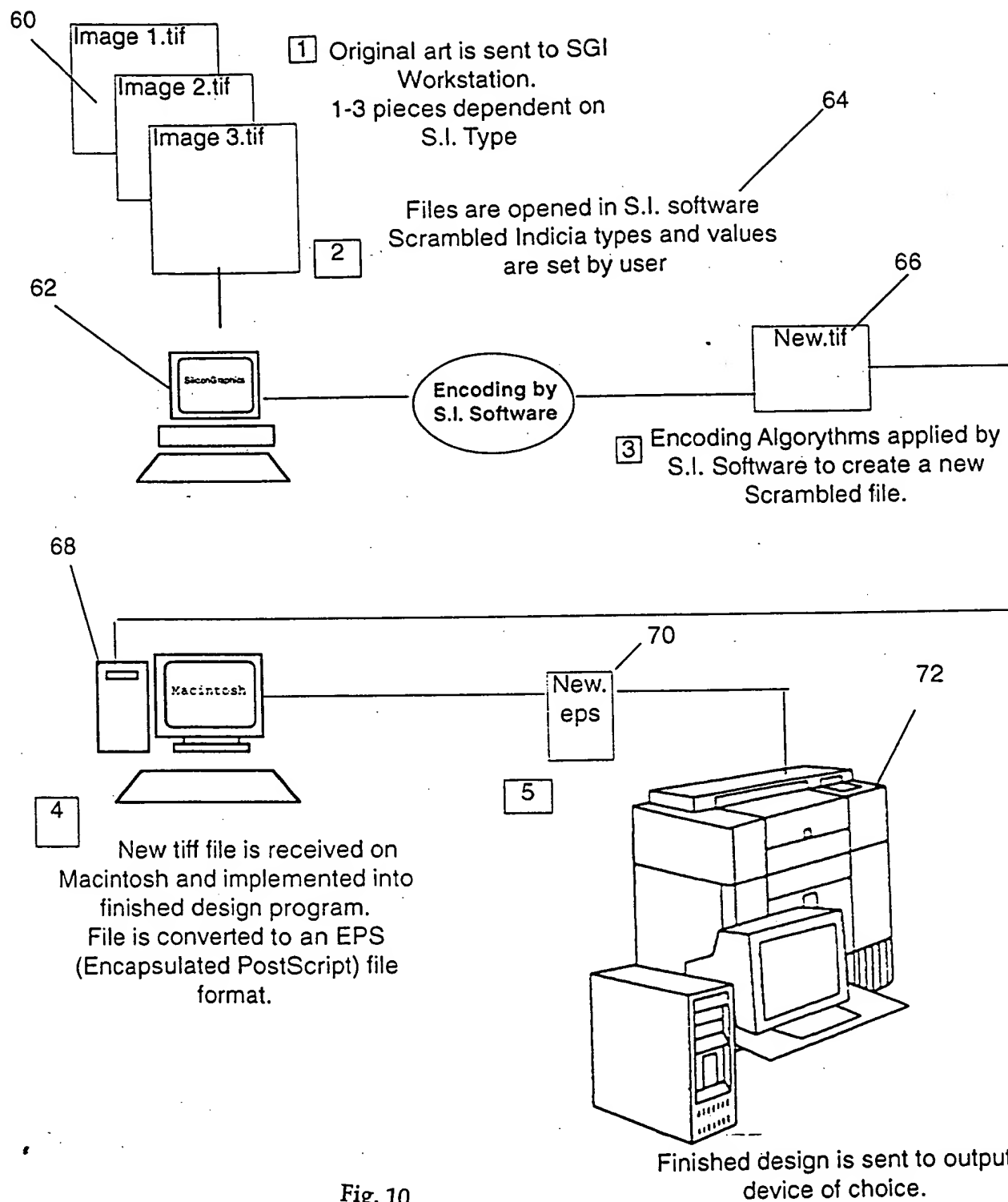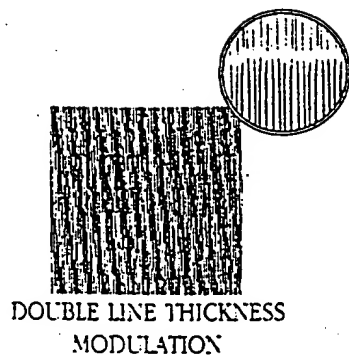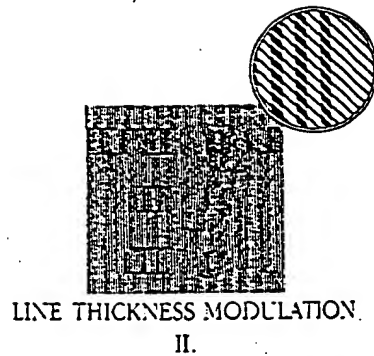Incorporates the Hidden Image
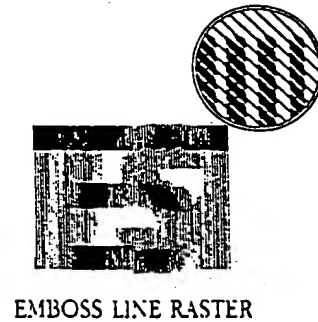Feature created using SI®Software.

Fig. 9

60

Image 1.tif

Image 2.tif

Image 3.tif

1 Original art is sent to SGI
Workstation.
1-3 pieces dependent on
S.I. Type

64

Files are opened in S.I. software
Scrambled Indicia types and values
are set by user

2

66

62

SiconGraphics

Encoding by
S.I. Software

New.tif

3 Encoding Algorythms applied by
S.I. Software to create a new
Scrambled file.

68

Macintosh

70

New.
eps

72

4

5

New tiff file is received on
Macintosh and implemented into
finished design program.
File is converted to an EPS
(Encapsulated PostScript) file
format.

Finished design is sent to output
device of choice.

Fig. 10

DOUBLE LINE THICKNESS
MODULATION

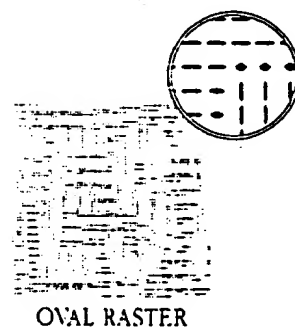LINE THICKNESS MODULATION
II.

EMBOSS LINE RASTER
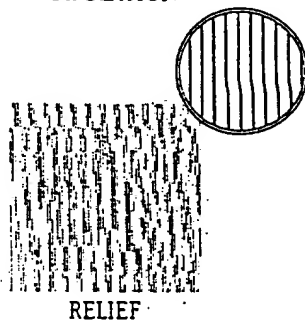
RELIEF
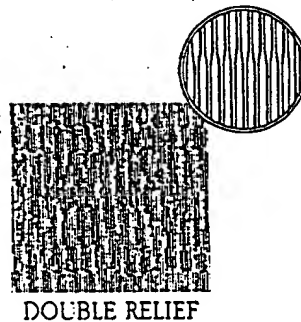
DOUBLE RELIEF
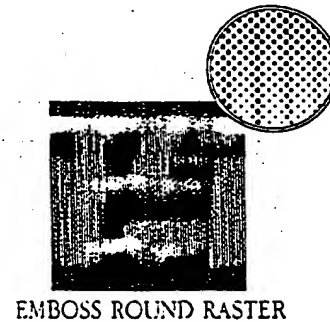
EMBOSS ROUND RASTER
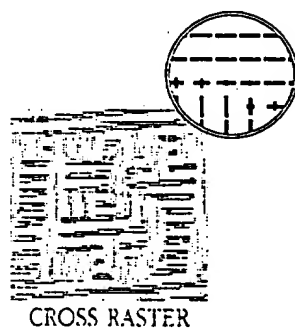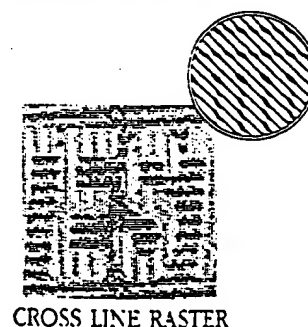
CROSS RASTER
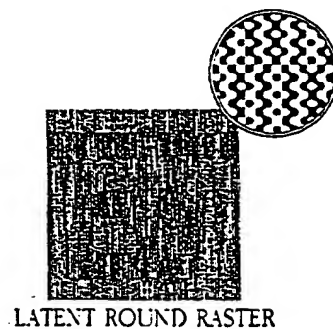
LATENT ROUND RASTER

OVAL RASTER

CROSS LINE RASTER

Fig. 11

FIG 12
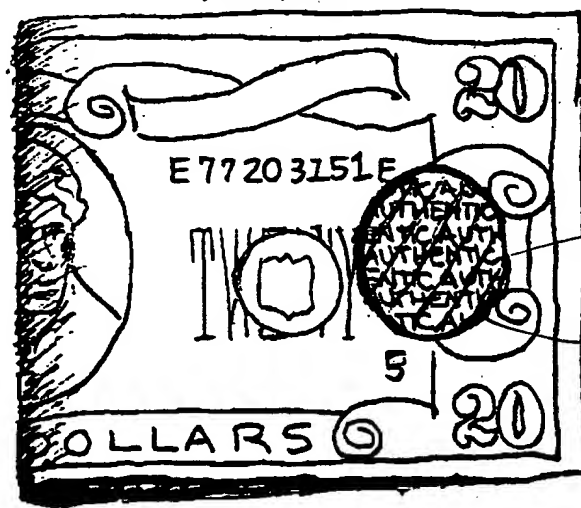
FIG 13

FOLDED

FIG 14

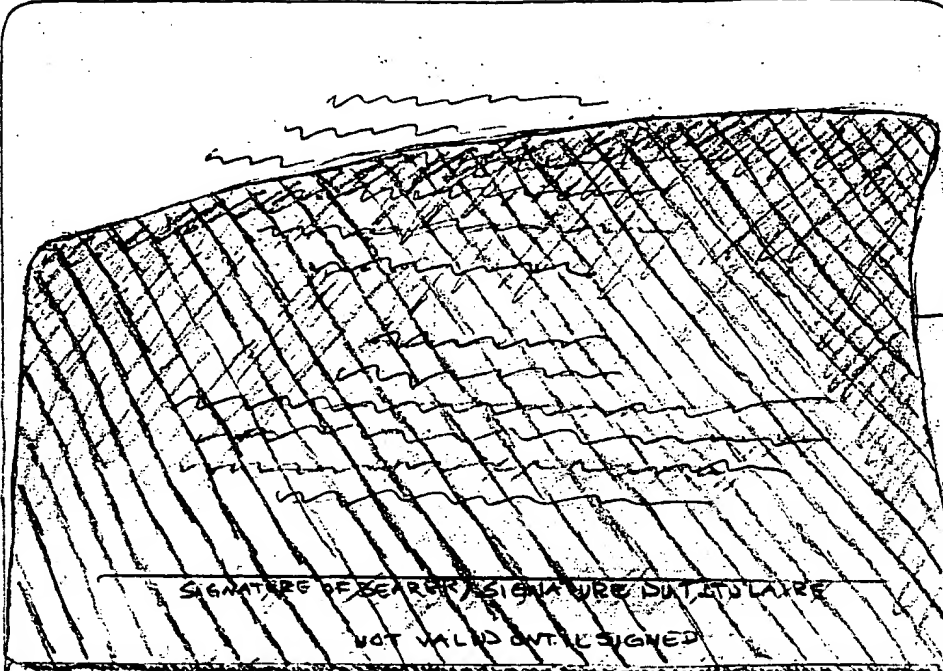SIGNATURE OF BEARER/SIGNATURE DU TITULAIRE

NOT VALID UNTIL SIGNED

134

UNITED STATES OF AMERICA

04 3539 332

PASSPORT
PASSEPORT
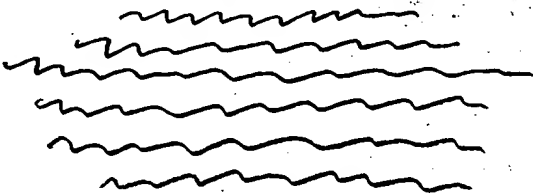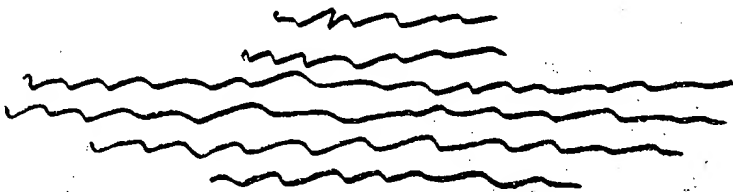
F

U.S.A.

PASSPORT AGENCY

MIAMI

132

130

FIG 15

SIGNATURE OF BEARER / SIGNATURE DU TITULAIRE

NOT VALID UNTIL SIGNED

FIG 16

FIG.17

PCUSASMITH
0453698422690

150

151

152

154

156

2

3

FIG. 18

150

3

2'

VALID · VALID
ID · VALID · VA
D · VALID · VA
VA D · VALID
VA D · VALID · VA
D · VALID · VA
VA D · VALID · VA
VALID · VA D
D · VALID · VA
VALID · VALID

158

154

156